TLX CSS-SUB1
POWERED SUBWOOFER

SERVICE MANUAL

THE TLX CS-SUB1 SUBWOOFER IS PART OF THE TLX CS-SP1OOO SYSTEM

JBL Consumer Products
250 Crossways Park Dr.
Woodbury, New York 11797

Rev0 8/2002

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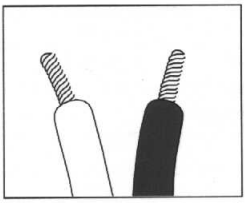
TLX CSS-SUB1 SPECIFICATIONS

Driver	Low Frequency 8” Woofer
	(Nominal Impedance 8 Ω) DCR = 7.0 Ω
Enclosure Design	Bass Reflex
Amplifier Power	75 watts RMS
Frequency Response	45Hz – 150Hz (± 6dB)
Crossover Frequency	50 to 200 Hz Continuously Variable
Inputs	High Level (Speaker) Input terminals
Outputs	Full Range speaker
Sensitivity	1.7V
Input Impedance	4.7K Ω
Auto-off Delay	8 minutes
Auto-on Threshold	1mV
Dimensions	13 3/4 x 14 3/4 x 15 1/8” (H x W x D)
	(349 x 374 x 384mm) includes 1 3/4” feet
Shipping Weight	26 lbs./11.8kg

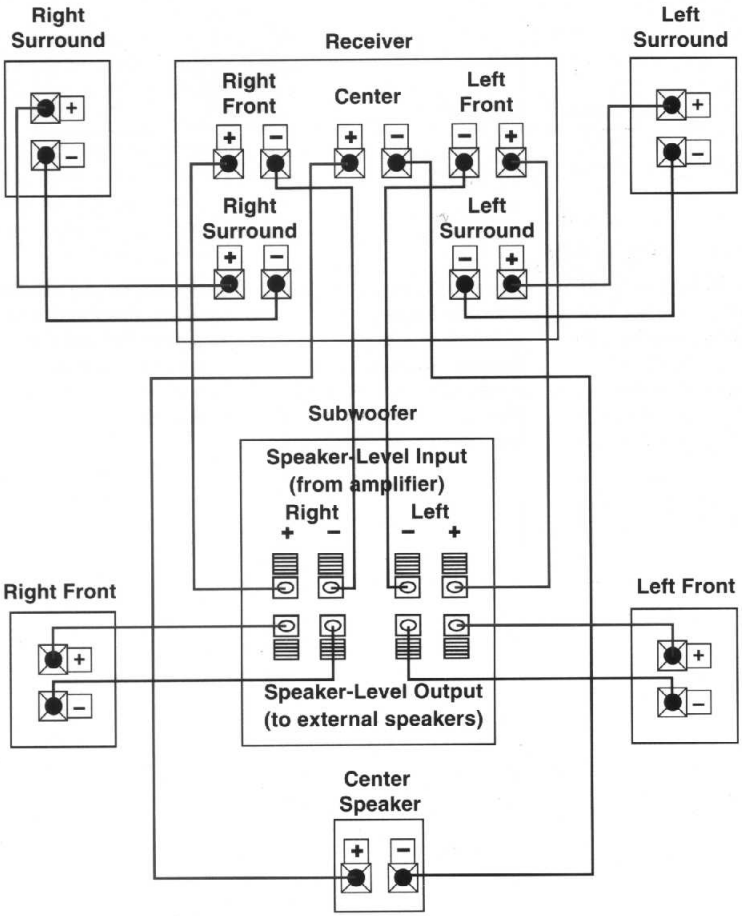
Speaker Connections

Connection Tips



Separate and strip the ends of the speaker wire as shown. Speakers and electronics terminals have corresponding (+) and (–) terminals. It is important to connect both speakers identically: (+) on the speaker to (+) on the amplifier and (–) on the speaker to (–) on the amplifier. Wiring "out of phase" results in thin sound, weak bass and a poor stereo image.

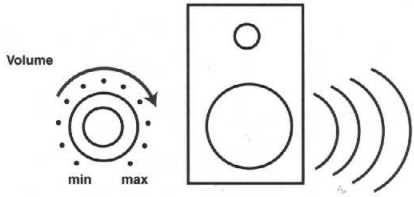
Speaker level

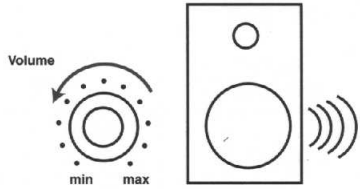


Operation

Mode	Procedure	LED Status
Off	Receiver/amplifier off	Red
On	Receiver/amplifier on and playing program material	Green
Standby	Simply turn off your receiver/amplifier. The subwoofer will turn off after approximately five minutes. The subwoofer will turn on when your receiver/amplifier begins playing again.	Red

Volume





Crossover Frequency

The crossover-frequency knob determines the highest frequency your subwoofer will reproduce. It allows a seamless transition from the subwoofer to the satellite speakers. Experiment with this adjustment to find the crossover frequency that sounds best with your speakers. When using the speaker-level connections, the crossover adjustment will also limit the low frequencies being sent to your satellite speakers. This means that your satellites won't have to try and reproduce the information the subwoofer is playing.

TLX CSS-SUB1 TEST PROCEDURE

Equipment needed:

- Function/signal generator/sweep generator
- Integrated Amplifier
- Multimeter
- Speaker cables

General Function *UUT = Unit Under Test*

1) Connect one pair of speaker cables to either high level input terminal on UUT. Cables should be connected to an integrated amplifier fed by the signal generator. VOLUME control should be full counterclockwise.
2) Turn on generator and adjust so that speaker level output is **2.0V, 50 Hz**. Turn VOLUME control full clockwise, FREQUENCY control full clockwise.
3) Green LED should light, immediate bass response should be heard and felt from woofer and port tube opening.

Sweep Function

1) Follow steps 1 - 4 above, using a sweep generator as a signal source.
2) Sweep generator from **20Hz to 300Hz.** Listen to the cabinet and drivers for any rattles, clicks, buzzes or any other noises. If any unusual noises are heard, remove driver and test.

Driver Function

1) Remove driver from cabinet; detach + and - wire clips.
   Check DC resistance of driver; it should be **7.0** ohms ±10%.
2) Connect a pair of speaker cables to driver terminals. Cables should be connected to an integrated amplifier fed by a signal generator. Turn on generator and adjust so that speaker level output is **5.0V.**
3) Sweep generator from **20Hz to 1kHz.** Listen to driver for any rubbing, buzzing, or other unusual noises.

TLX CSS-SUB1 PARTS LIST

MECHANICAL/PACKING PARTS LIST

Reference	Part Number	Description	Quan.
O/M	15-30-4262-00	Owner's manual for TLX CS-SP1000	1
CABINET	Not for Sale	Enclosure	1
DRIVER	44421	8" Woofer	1
Feet	846-7652 or 15-71-4039-00	Plastic Feet	4
Amp	A3D1F03U1013	Complete Amplifier Assembly	1
TM501	CO1334	High Level Input Terminal Block	1
SW501	507-8046	Slide switch, (phase)	1
Knob	710-8047	Level, Freq. Knobs	2
F802	870-0017	2A ACG Line Fuse	1
RLY601	510-8050	Output Relay	1
COVER	XX1275	Plastic cover for amp	1
CORD	HA1132	AC Power Cord 120v	1
HARNESS	HA1218	Speaker wiring harness – Molex end	1

ELECTRICAL PARTS LIST

Variable Resistors

VR502	146-8020	50K x 2 Frequency Pot.	1
VR501	RS2087	10K x 1 Gain Pot.	1

Diodes

D503-511, D601-605	5636-1SS133	Small signal diode 1SS133	14

Integrated Circuits

IC501,502,503, 504,505	RH14558-001	RC4558L Dual Op-Amp	5
IC601	205419000206	uPC1237HA Limiter IC	1

Transistors

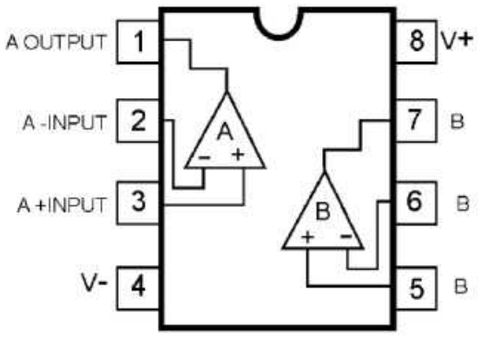
Q504,506,509	9163310420	NPN DTC124ES	3
Q507,508,613	9163011220	PNP DTA124ES	3
Q610	2050C5100007	NPN 2SC5100	1
Q611	2050A1908007	PNP 2SA1908	1
Q609	TR1330	PNP 2SA965	1
Q608	2SC2235	NPN 2SC2235	1
Q607	2050C403806T	NPN 2SC4038	1
Q501,502,604	X20-0063	NPN 2SC2785	3
Q601,602,603, 509	X20-0381	PNP 2SA1175	4

Misc.

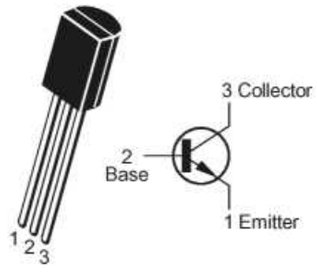
D512	Bi-color LED	LE1032	1
C801,802	CP1584	Main filter capacitor 6800 mfd.	2

Integrated Circuit/Transistor Pinouts

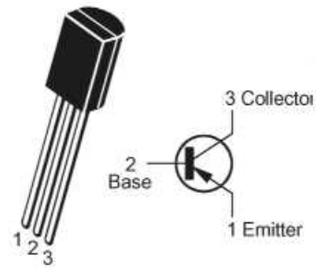
IC501,502,503,504,505 NJM4558D



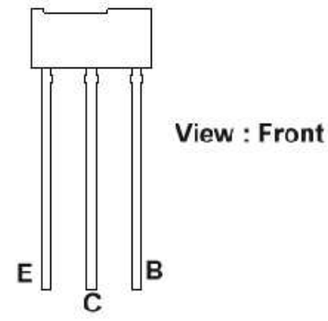
Q608 2SC2235



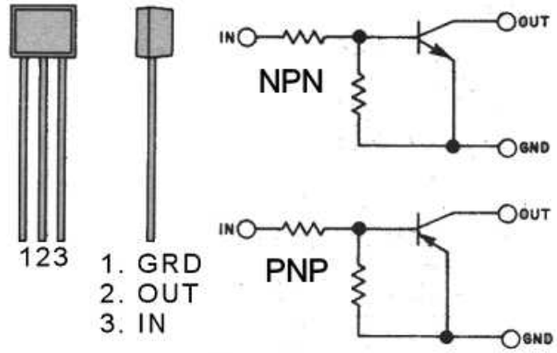
Q609 2SA965



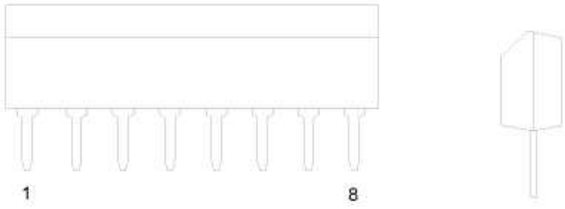
Q607 2SA4038



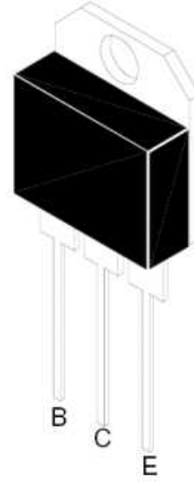
Q503-507 DTC124ES/DTA124ES



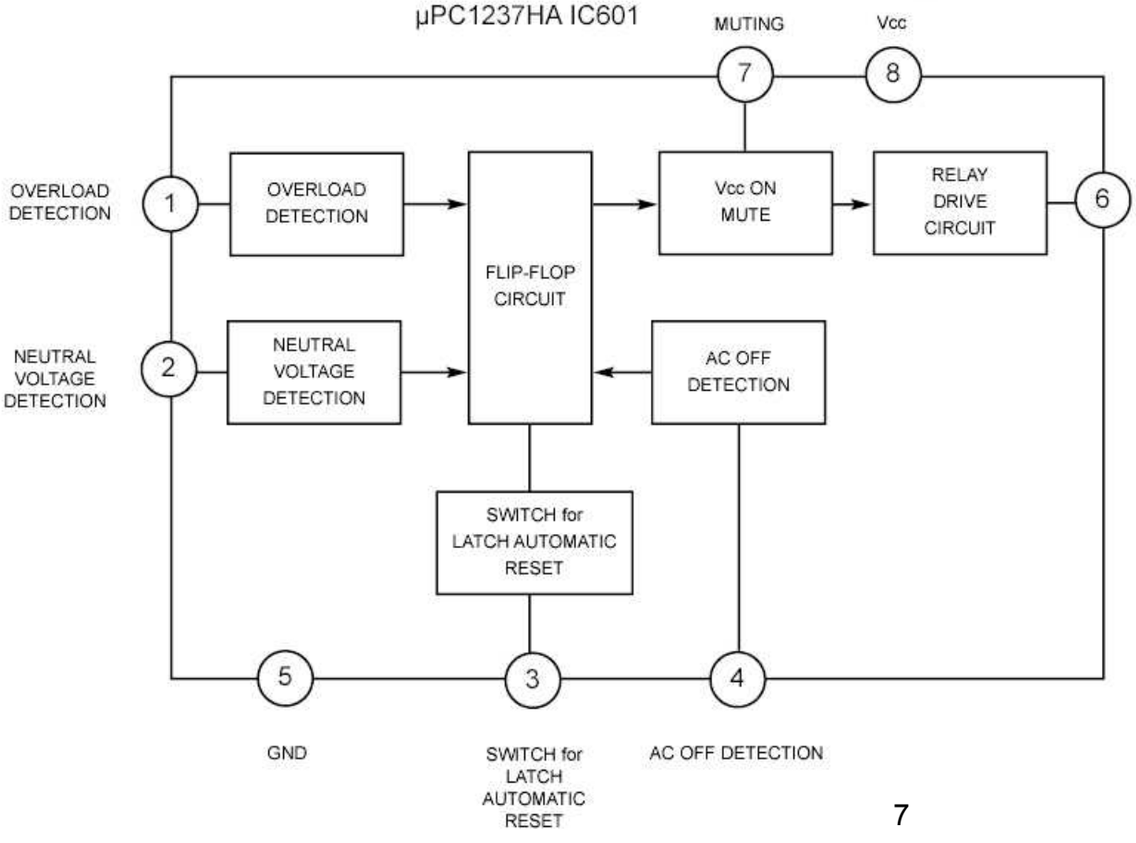
µPC1237HA IC601



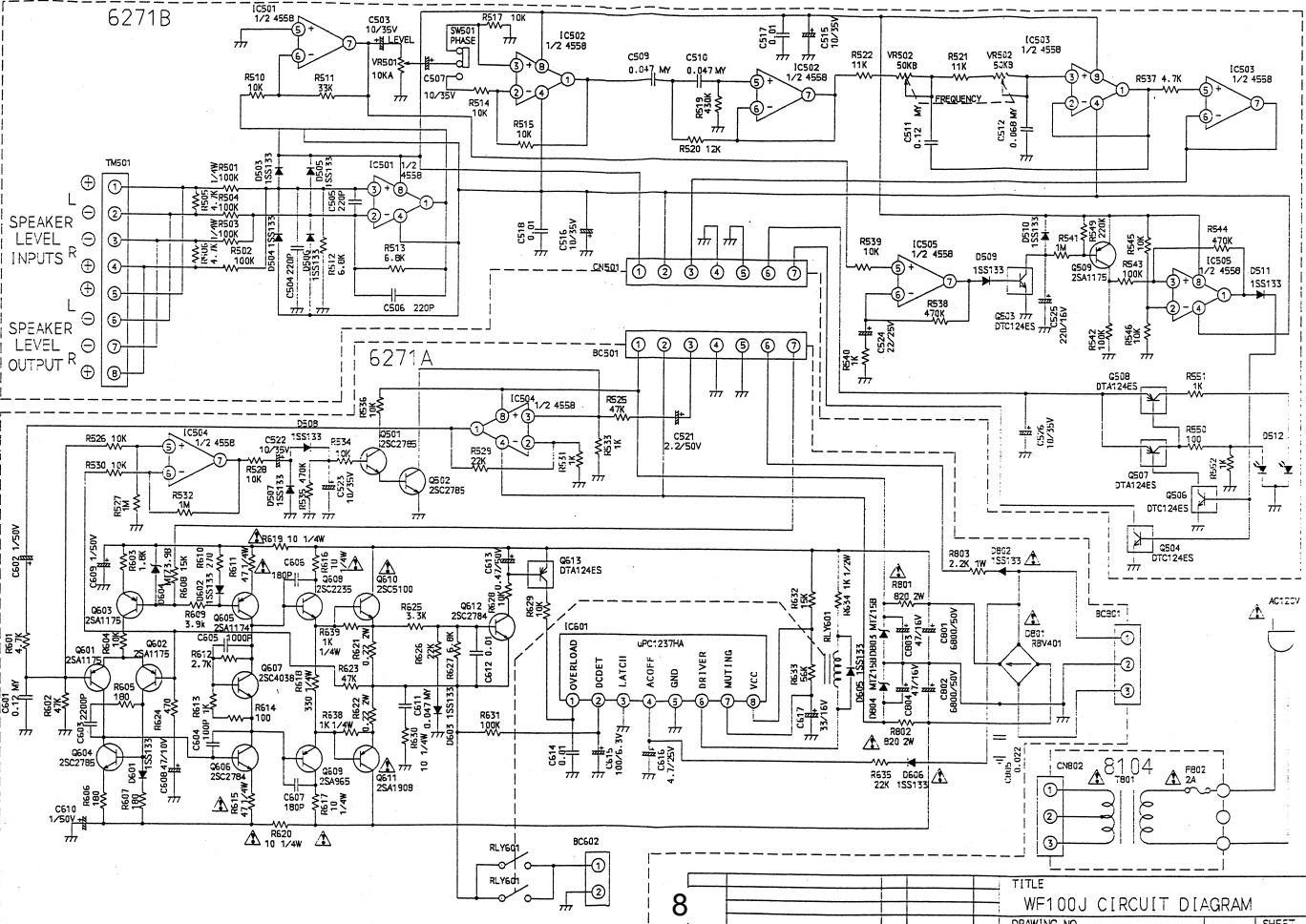
Q610,611 2SC5100 2SA1908



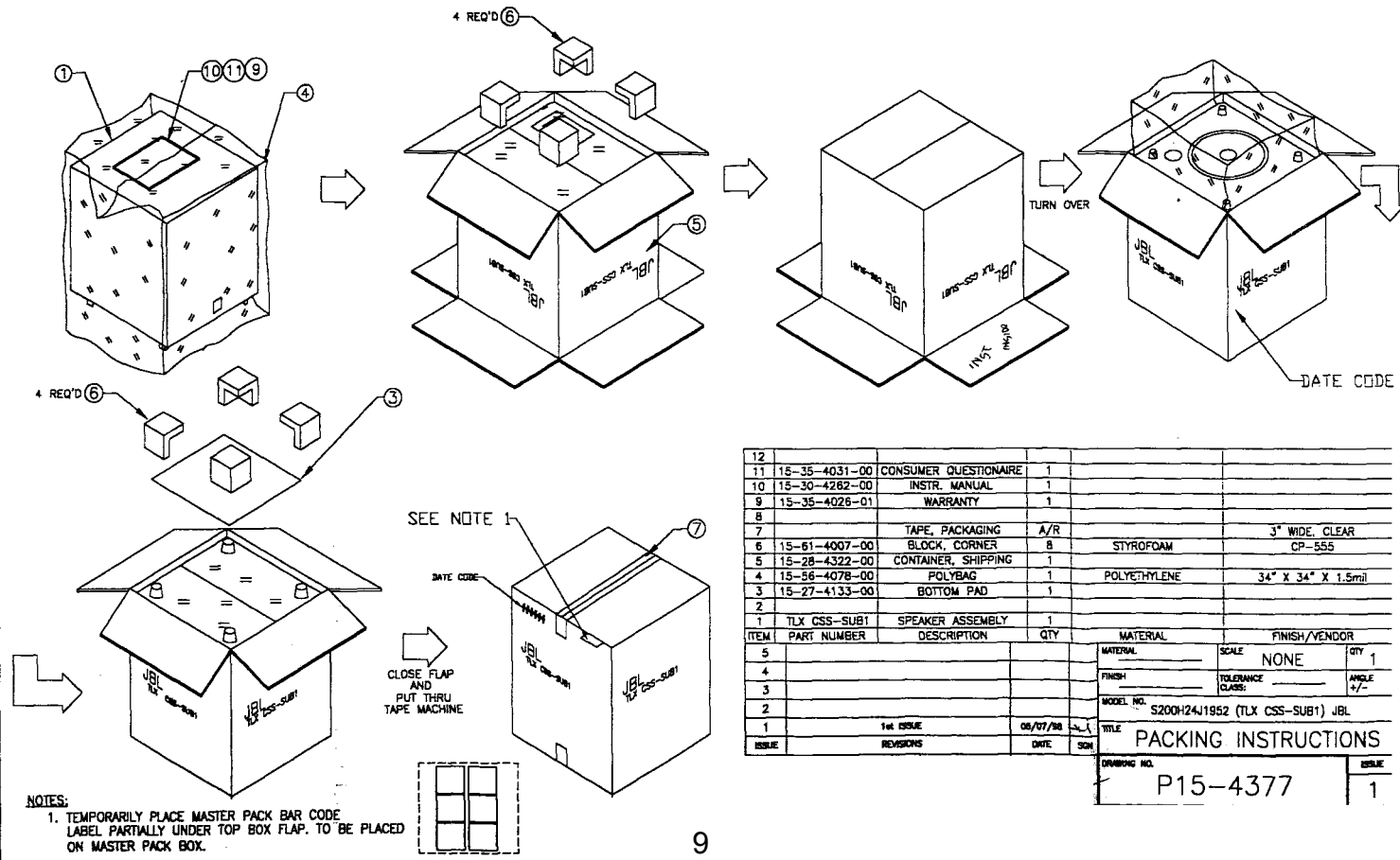
µPC1237HA IC601



Q501,502,509,601-606,612 2SA1174/2SA1175 2SC2784/2SC2785


6271B
6271A
SPEAKER LEVEL INPUTS L R
SPEAKER LEVEL OUTPUT L R
TM501
IC501 1/2 4558
IC502 1/2 4558
IC503 1/2 4558
IC504 1/2 4558
IC505 1/2 4558
SW501 PHASE
VR501 10KA LEVEL
VR502 50KB FREQUENCY
VR503 50KB
IC601 uPC1237HA
OVERLOAD
DCDET
LATCH
ACOFF
GND
DRIVER
MUTING
VCC
RLY601
RLY602
BC501
BC502
BC601
CN501
CNB02
TB01
FB02 2A
DB01 RBV401
AC120V
TITLE
WF100J CIRCUIT DIAGRAM
8

PACKAGING



ITEM	PART NUMBER	DESCRIPTION	QTY	MATERIAL	FINISH/VENDOR
12					
11	15-35-4031-00	CONSUMER QUESTIONAIRE	1		
10	15-30-4262-00	INSTR. MANUAL	1		
9	15-35-4026-01	WARRANTY	1		
8					
7		TAPE, PACKAGING	A/R		3" WIDE, CLEAR
6	15-61-4007-00	BLOCK, CORNER	8	STYROFOAM	CP-555
5	15-28-4322-00	CONTAINER, SHIPPING	1		
4	15-56-4078-00	POLYBAG	1	POLYETHYLENE	34" X 34" X 1.5mil
3	15-27-4133-00	BOTTOM PAD	1		
2					
1	TLX CSS-SUB1	SPEAKER ASSEMBLY	1		

ISSUE	REVISIONS	DATE	SIGN
1	1st ISSUE	05/07/98	

MATERIAL: — | SCALE: NONE | QTY: 1
FINISH: — | TOLERANCE CLASS: — | ANGLE +/-: —
MODEL NO.: S200H24J1952 (TLX CSS-SUB1) JBL
TITLE: PACKING INSTRUCTIONS
DRAWING NO.: P15-4377 | ISSUE: 1

NOTES:
1. TEMPORARILY PLACE MASTER PACK BAR CODE LABEL PARTIALLY UNDER TOP BOX FLAP. TO BE PLACED ON MASTER PACK BOX.